

GOVERNMENT DOCUMENTS:

CLIMATE CHANGE

GREENHOUSE GAS LEGISLATION: SUMMARY AND ANALYSIS OF H.R. 2454 AS REPORTED BY THE HOUSE COMMITTEE ON ENERGY AND COMMERCE

Mark Holt and Gene Whitney. Congressional Research Service (CRS). June 17, 2009. 115 pages.

http://assets.opencrs.com/rpts/R40643_20090617.pdf

H.R. 2454, the American Clean Energy and Security Act of 2009, was introduced May 15, 2009, by Representatives Waxman and Markey, and was subsequently modified (both technical and substantive changes) and ordered reported by the House Committee on Energy and Commerce on May 21, 2009. The bill was reported (amended) June 5. The four titles of the legislation cover clean energy, energy efficiency, reducing global warming pollution, and transitioning to a clean energy economy. H.R. 2454 would establish a cap-and-trade system designed to reduce U.S. greenhouse gas emissions; the market-based approach would establish an absolute cap on the emissions from covered entities and would allow trading of emissions permits (“allowances”).

GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES

U.S. Global Change Research Program. June 16, 2009. 196 pages.

<http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf>

This study, produced by a consortium of experts from 13 U.S. government science agencies and from several major universities and research institutes, finds that Americans are already being affected by climate change through extreme weather, drought and wildfire trends and details how the nation’s transportation, agriculture, health, water and energy sectors will be affected in the future. It also finds that the current trend in the emission of greenhouse gas pollution is significantly above the worst-case scenario that this and other reports have considered.

REMARKS ON THE U.S. DELEGATION'S JUNE 7-10 TRIP TO CHINA TO DISCUSS CLIMATE AND ENERGY ISSUES

Todd Stern, Special Envoy for Climate Change. U.S. Department of State. Bureau of Public Affairs. Washington, DC. June 12, 2009.

<http://www.state.gov/g/oes/rls/remarks/2009/124705.htm>

Among the issues stressed with the Chinese were the need for China to develop a long term, low-carbon pathway consistent with what the science is telling us; significant actions in the mid-term range between now and 2020 that will reduce emissions very significantly from where they otherwise would have been; and to keep China on that low-carbon pathway forward; that they’ll need to make a strong commitment to

carry these actions out, and that their actions and the underlying numbers will need to be transparent. This is essentially a question of measuring and monitoring emissions. It goes by the rubric in the Copenhagen negotiations of MRV, which is measuring, reporting and verifying.

AVIATION AND CLIMATE CHANGE: AIRCRAFT EMISSIONS EXPECTED TO GROW, BUT TECHNOLOGICAL AND OPERATIONAL IMPROVEMENTS AND GOVERNMENT POLICIES CAN HELP CONTROL EMISSIONS

Government Accountability Office (GAO). Report to Congressional Committees. June 2009. 100 pages.

<http://www.gao.gov/new.items/d09554.pdf>

Aircraft emit greenhouse gases and other emissions, contributing to increasing concentrations of such gases in the atmosphere. Many believe these gases may negatively affect the earth's climate. Given forecasts of growth in aviation emissions, some governments are taking steps to reduce emissions. In response to a congressional request, GAO reviewed estimates of aviation's current and future contribution to greenhouse gas and other emissions that may affect climate change; existing and potential technological and operational improvements that can reduce aircraft emissions; and policy options for governments to help address commercial aircraft emissions.

PRESS CONFERENCE CALL WITH SENIOR U.S. CLIMATE CHANGE OFFICIALS

Todd Stern, Special Envoy for Climate Change and Jonathan Pershing, Deputy Special Envoy for Climate Change. Washington, DC. May 29, 2009

<http://www.state.gov/g/oes/rls/remarks/2009/124210.htm>

Through concrete actions, the Obama Administration has solidified its commitment to combating climate change. And really we have made and the President has made and announced an enormous change in U.S. policy. I would point out that the Administration's proposed effort on climate change going forward is roughly equal to what is being proposed by the EU.

MARKET-BASED GREENHOUSE GAS CONTROL: SELECTED PROPOSALS IN THE 111TH CONGRESS

Jonathan L. Ramseur, Larry Parker and Brent D. Yacobucci. Congressional Research Service (CRS). May 27, 2009. 20 pages.

http://assets.opencrs.com/rpts/R40556_20090527.pdf

As of the date of this report, members in the 111th Congress have introduced seven stand-alone proposals that would control greenhouse gas (GHG) emissions. The proposals offered to date would employ market-based approaches -- either a cap-and-trade or carbon tax system, or some combination thereof -- to reduce GHG emissions. The legislative proposals are varied in their overall approaches in controlling GHG emissions. Some control emissions by setting a quantity (or cap); others control emissions by setting a price (or tax/fee). In addition, the proposals differ in their inclusion of particular design elements, such as whether or not to allow offsets (emission reduction opportunities from economic sectors not directly addressed by the primary approach).

THE ROLE OF OFFSETS IN A GREENHOUSE GAS EMISSIONS CAP-AND-TRADE PROGRAM: POTENTIAL BENEFITS AND CONCERNS

Jonathan L. Ramseur. Congressional Research Service (CRS). May 18, 2009. 34 pages.

http://assets.opencrs.com/rpts/RL34436_20090518.pdf

If Congress establishes a greenhouse gas (GHG) emissions reduction program (e.g., cap-and-trade system), the treatment of GHG emission offsets would likely be a critical design element. An offset is a measurable reduction, avoidance, or sequestration of GHG emissions from a source not covered by an emission reduction program. If allowed, offset projects could generate “emission credits,” which could be used by a regulated entity (e.g., power plant) to comply with its reduction requirement and provide cost savings and other benefits. Offsets have, however, generated concern.

CLIMATE CHANGE: POTENTIAL REGULATION OF STATIONARY GREENHOUSE GAS SOURCES UNDER THE CLEAN AIR ACT

Larry Parker and James E. McCarthy. Congressional Research Service (CRS). May 14, 2009. 32 pages.

http://assets.opencrs.com/rpts/R40585_20090514.pdf

Although new legislation to address greenhouse gases is a leading priority of the President and many members of Congress, the ability to limit these emissions already exists under various Clean Air Act authorities that Congress has enacted, a point underlined by the Supreme Court in an April 2007 decision, “Massachusetts v. EPA.” Indeed, the EPA has already begun the process that could lead to greenhouse gas regulations for motor vehicles in response to that court decision. Thus, controlling GHGs could follow a two-track approach, with Congress and the Administration pursuing new legal authority (for cap-and-trade, carbon tax, or other mechanisms) at the same time that the Administration, through the Environmental Protection Agency (EPA), exercises existing authority under the Clean Air Act to begin regulation of greenhouse gas emissions.

CARS AND CLIMATE: WHAT CAN EPA DO TO CONTROL GREENHOUSE GASES FROM MOBILE SOURCES?

James E. McCarthy. Congressional Research Service (CRS). May 8, 2009. 20 pages.

http://assets.opencrs.com/rpts/R40506_20090508.pdf

The key to using the Clean Air Act’s authority to control greenhouse gas (GHG) emissions is for the EPA Administrator to find that GHG emissions are air pollutants that endanger public health or welfare. EPA has received eight petitions asking that it make endangerment findings and proceed to regulate emissions from mobile sources, including motor vehicles, aircraft, ships, nonroad vehicles and engines, and fuels, under Title II of the Clean Air Act. This report discusses EPA’s authority under Title II and provides information regarding the mobile sources that might be regulated under this authority.

THE DISTRIBUTION OF REVENUES FROM A CAP-AND-TRADE PROGRAM FOR CO₂ EMISSIONS

Douglas W. Elmendorf, Director. Congressional Budget Office (CBO). Testimony before the Committee on Finance, U.S. Senate. May 7, 2009. 28 pages.

http://www.cbo.gov/ftpdocs/101xx/doc10115/05-07-Cap_and_Trade_Testimony.pdf

One option for reducing greenhouse gas (GHG) emissions in a cost-effective manner is to establish a carefully designed cap-and-trade program. Under such a program, the government would set gradually tightening limits on emissions, issue rights (or allowances) consistent with those limits, and then let firms trade the allowances among themselves. Such a cap-and-trade program would lead to higher prices for energy and energy-intensive goods, which would in turn provide incentives for households and businesses to use less energy and to develop energy sources that emit smaller amounts of CO₂.

SOLVING THE PUZZLE: RESEARCHING THE IMPACTS OF CLIMATE CHANGE AROUND THE WORLD

National Science Foundation (NSF). May 1, 2009. 114 pages.

http://www.nsf.gov/news/special_reports/climate/pdf/NSF_Climate_Change_Report.pdf

Researchers funded by the National Science Foundation have discovered signs of a changing climate in nearly every corner of the globe, from the icy expanses of the polar regions of Earth to its equatorial ecosystems. Our planet's climate affects and is affected by the sky, land, ice, sea, life, and the people found on Earth. To piece together the entire puzzle of climate change -- what we know, what we still have to learn and what humankind can do to prepare for the future -- we must study all of the physical, natural, and human systems that contribute to, and interact with, Earth's climate system.

POTENTIAL IMPACTS OF CLIMATE CHANGE IN THE UNITED STATES

Congressional Budget Office (CBO). May 2009. 33 pages.

http://www.cbo.gov/ftpdocs/101xx/doc10107/05-04-ClimateChange_forWeb.pdf

This paper presents an overview of the current understanding of the impacts of climate change in the United States, emphasizing the wide range of uncertainty about the magnitude and timing of those impacts and the implications of that uncertainty for the formulation of effective policy responses. The analysis draws from numerous published sources to summarize the current state of climate science and provide a conceptual framework for addressing climate change as an economic concern.

REMARKS AT THE MAJOR ECONOMIES FORUM ON ENERGY AND CLIMATE

Hillary Rodham Clinton, U.S. Secretary of State. Loy Henderson Conference Room, Washington, DC. April 27, 2009.

<http://www.state.gov/secretary/rm/2009a/04/122240.htm>

There is much going on in the world today that challenges us, and it is remarkable that each of your nations has committed to this because we know that climate change threatens lives and livelihoods. Desertification and rising sea levels generate increased competition for food, water and resources. But we also have seen increasingly the dangers that these transpose to the stability of societies and governments. We see how this can breed conflict, unrest and forced migration. So no issue we face today has broader long-term consequences or greater potential to alter the world for future generations.

PREPARING FOR CLIMATE CHANGE: ADAPTATION PROGRAMS AND POLICIES

Thomas R. Karl, Director, National Climatic Data Center and Climate Services Lead. National Oceanic and Atmospheric Administration (NOAA). U.S. Department of Commerce. Testimony before the Subcommittee on Energy and Environment, Committee on Energy and Commerce, U.S. House of Representatives. March 25, 2009. 9 pages.

http://energycommerce.house.gov/Press_111/20090325/testimony_karl.pdf

There are two courses society can take to respond to climate-related impacts: mitigation, meaning options for reducing heat-trapping emissions such as carbon dioxide, methane, nitrous oxide, and halocarbons; and adaptation, meaning changes made to better respond to present or future climatic and other environmental conditions, thereby reducing harm or taking advantage of opportunity. While increased mitigation measures will likely reduce the need for future adaptation, the United States and the world will continue to experience changing climate conditions and resulting impacts. Therefore, both mitigation and adaptation are essential for a comprehensive climate change response strategy.

ENVIRONMENTAL PROTECTION AND CONSERVATION

ENVIRONMENTAL ACTIVITIES OF THE U.S. COAST GUARD

Jonathan L. Ramseur. Congressional Research Service (CRS). May 7, 2009. 9 pages.

http://assets.opencrs.com/rpts/RS22145_20090507.pdf

The U.S. Coast Guards (USCGs) environmental activities focus on prevention programs, accompanied by enforcement and educational activities. An important component is maritime oil spill prevention, which includes inspection of U.S. and foreign-flagged ships to ensure compliance with U.S. laws and international agreements. Another prevention effort, minimizing marine debris, addresses commercial items (e.g., lost nets and fishing lines), as well as trash from recreational fishing and boating (e.g., beverage cans, bottles, and pieces of foam plastic).

ENDANGERED SPECIES ACT: THE U.S. FISH AND WILDLIFE SERVICE HAS INCOMPLETE INFORMATION ABOUT EFFECTS ON LISTED SPECIES FROM SECTION 7 CONSULTATIONS

Government Accountability Office (GAO). Report to Congressional Requesters. May 2009. 39 pages.

<http://www.gao.gov/new.items/d09550.pdf>

The western United States, including vast stretches of federal land, is home to more than a third of the 1,317 species listed under the Endangered Species Act. Under section 7 of the act, federal agencies must ensure that any actions they authorize, fund, or carry out, whether on federal or private lands, do not jeopardize listed species. To fulfill this responsibility, the agencies often must formally consult with the Department of the Interior's U.S. Fish and Wildlife Service (Service), which issues a biological opinion assessing whether an action is likely to "take," or harm, a listed species. The Service may require the agencies to monitor and report on the action's effects on listed species, including take. For listed species subject to formal consultations in 11 western states, GAO was asked to examine the extent to which the Service tracks required monitoring reports and cumulative take.

POLLUTION AND WASTE

EPA CHEMICAL ASSESSMENTS: PROCESS REFORMS OFFER THE POTENTIAL TO ADDRESS KEY PROBLEMS

John B. Stephenson, Director, Natural Resources and Environment. Government Accountability Office (GAO). Testimony before the Subcommittee on Investigations and Oversight, Committee on Science and Technology, U.S. House of Representatives. June 11, 2009. 13 pages.

<http://www.gao.gov/new.items/d09774t.pdf>

The Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) contains EPA's scientific position on the potential human health effects of exposure to more than 540 chemicals. Toxicity assessments in the IRIS database constitute the first two critical steps of the risk assessment process, which in turn provides the foundation for risk management decisions. Thus, IRIS is a critical component of EPA's capacity to support scientifically sound environmental decisions, policies, and regulations.

ENVIRONMENTAL CONTAMINATION: LESSONS LEARNED FROM THE CLEANUP OF FORMERLY USED DEFENSE AND MILITARY MUNITIONS SITES

Anu Mittal, Director, Natural Resources and Environment. Government Accountability Office (GAO). Testimony before the Subcommittee on Federal Workforce, Postal Service, and the District of Columbia, Committee on Oversight and Government Reform, U.S. House of Representatives. June 10, 2009. 21 pages.

<http://www.gao.gov/new.items/d09779t.pdf>

Under the Defense Environmental Restoration Program (DERP), the Department of Defense (DOD) has charged the Army Corps of Engineers (the Corps) with cleaning up 4,700 formerly used defense sites (FUDS) and active sites that were under its jurisdiction when they were initially contaminated. This testimony discusses GAO's past work relating to remediation efforts at FUDS and military munitions sites. Specifically, it addresses: the impact that shortcomings in information and guidance can have on decision-making; the impact that incomplete data can have on cost estimates and schedules; how funding for a particular site may be influenced by overall program goals; and how better coordination can increase public confidence in cleanups and facilitate effective decision-making.

NUCLEAR WASTE: DOE'S ENVIRONMENTAL MANAGEMENT INITIATIVES REPORT IS INCOMPLETE

Government Accountability Office (GAO). Report to Congressional Committees. June 2, 2009. 11 pages.

<http://www.gao.gov/new.items/d09697r.pdf>

The Department of Energy (DOE) spends billions of dollars annually to clean up nuclear waste at sites across the nation that produced nuclear weapons from the 1940s through the end of the Cold War. This waste can threaten public health and the environment. DOE's Office of Environmental Management currently oversees more than 80 of these cleanup projects, primarily at government-owned, contractor-operated sites throughout the nation. Some of these highly complex projects have completion dates beyond 2050.

BIOMONITORING: EPA NEEDS TO COORDINATE ITS RESEARCH STRATEGY AND CLARIFY ITS AUTHORITY TO OBTAIN BIOMONITORING DATA

Government Accountability Office (GAO). Report to Congressional Requesters. April 2009. 37 pages.

<http://www.gao.gov/new.items/d09353.pdf>

Biomonitoring, which measures chemicals in people's tissues or body fluids, has shown that the U.S. population is widely exposed to chemicals used in everyday products. Some of these have the potential to cause cancer or birth defects. Moreover, children may be more vulnerable to harm from these chemicals than adults. The Environmental Protection Agency (EPA) is authorized under the Toxic Substances Control Act (TSCA) to control chemicals that pose unreasonable health risks. GAO was asked to review the extent to which EPA incorporates information from biomonitoring studies into its assessments of chemicals, steps that EPA has taken to improve the usefulness of biomonitoring data, and extent to which EPA has the authority under TSCA to require chemical companies to develop and submit biomonitoring data to EPA.

THINK TANKS AND RESEARCH CENTERS:

The opinions expressed in these publications do not necessarily reflect the views of the U.S. Government

CLIMATE CHANGE

EMISSION REDUCTIONS UNDER CAP-AND-TRADE PROPOSALS IN THE 111TH CONGRESS

John Larsen and Robert Heilmayr. World Resources Institute (WRI). June 25, 2009. 7 pages.

http://pdf.wri.org/usclimatetargets_2009-06-25.pdf

This analysis provides an assessment of reductions in greenhouse gas (GHG) emissions relative to total U.S. emissions that could be achieved by cap-and-trade proposals currently submitted in the 111th Congress. This assessment includes an assessment of the substitute to H.R. 24541, the American Clean Energy and Security Act of 2009 (ACESA) and H.R. 1862, the Cap and Dividend Act of 2009 (CDA) sponsored by Congressman Van Hollen.

A PERFORMANCE STANDARDS APPROACH TO REDUCING CO₂ EMISSIONS FROM ELECTRIC POWER PLANTS

Edward S. Rubin, Carnegie Mellon University. Pew Center on Global Climate Change. Coal Initiative Reports, White Paper series. June 2009. 30 pages.

<http://www.pewclimate.org/docUploads/Coal-Initiative-Series-Rubin.pdf>

Significant reductions in the carbon dioxide (CO₂) emissions from fossil fuel power plants are urgently needed as part of a national effort to address global climate change. This paper describes one of several policy approaches for reducing CO₂ emissions from U.S. electric power plants, namely, the application of performance standards limiting CO₂ emissions from electric power generators. In contrast to a cap-and-trade policy that limits the total annual mass emissions of CO₂ from a collection of sources, a performance standard may apply to individual generating units or to a collection of plants. It typically specifies a maximum allowable rate of emissions per unit of product (e.g., pounds of CO₂ per megawatt-hour of electricity generated or sold), or a required percentage reduction in potential emissions.

GLOBAL SOLUTIONS TO GLOBAL WARMING: RECOMMENDATIONS FOR LEADERS AND POLICY MAKERS IN THE UNITED STATES AND CHINA

Natural Resources Defense Council (NRDC). Issue Paper. June 2009. 18 pages.

<http://www.nrdc.org/international/files/globalchina.pdf>

Two nations play a vital role in efforts to curb global warming and secure the world's energy supply: the United States of America and the People's Republic of China. Together, they account for more than 40 percent of global carbon dioxide emissions from fossil fuel use, more than 35 percent of the world's energy consumption, and more than 30 percent of the world's economic output, making their involvement in addressing the global warming crisis critical. As both nations suffer through tough economic times and commit to extraordinary economic stimulus packages, we are presented with an excellent opportunity to turn promises into real action. This issue paper recommends nine key steps for the Obama administration, the U.S. Congress, and leaders in China to strengthen U.S.-China climate change and energy engagement at this unique time.

AN EXPERIMENTAL ANALYSIS OF AUCTIONING EMISSIONS ALLOWANCES UNDER A LOOSE CAP

William Shobe, Karen Palmer, Erica Myers, Charles Holt, Jacob Goeree and Dallas Burtraw. Resources for the Future (RFF). RFF Discussion Paper 09-25. June 2009. 22 pages.

<http://www.rff.org/RFF/Documents/RFF-DP-09-25.pdf>

The direct sale of emissions allowances by auction is an emerging characteristic of cap-and-trade programs. This study is motivated by the observation that all of the major implementations of cap-and-trade regulations for the control of air pollution have started with a generous allocation of allowances relative to recent emissions history, a situation we refer to as a "loose cap." Typically more stringent reductions are achieved in subsequent years of a program. The authors use an experimental setting to investigate the effects of a loose cap environment on a variety of auction types.

THE INCIDENCE OF U.S. CLIMATE POLICY: ALTERNATIVE USES OF REVENUES FROM A CAP-AND-TRADE AUCTION

Dallas Burtraw, Richard Sweeney and Margaret A. Walls. Resources for the Future (RFF). RFF Discussion Paper No. 09-17. June 2009. 41 pages.

<http://www.rff.org/RFF/Documents/RFF-DP-09-17-REV.pdf>

This paper evaluates the costs to households of a carbon dioxide (CO₂) cap-and-trade program. The authors find important variation in the distribution of costs of the policy across 11 regions of the country and income deciles. The introduction of a price on CO₂ is regressive, but this may be outweighed by the distribution value of CO₂ emissions allowances. They evaluate five alternatives: three are progressive (expansion of the Earned Income Tax Credit and cap-and-dividend approaches), while the others are neutral (reduction in payroll tax) or amplify the regressivity (reduction in income tax). Regional differences are most substantial for low-income households.

ADAPTING TO CLIMATE CHANGE: PUBLIC HEALTH

Jonathan M. Samet. Resources for the Future (RFF). RFF Domestic Adaptation Series. June 2009. 40 pages.

<http://www.rff.org/rff/documents/RFF-Rpt-Adaptation-Samet.pdf>

The potential consequences of climate change extend to the health of the public, with warming of the planet projected to have both positive and negative consequences that will vary temporally and spatially. Climate change will not act to introduce new causes of morbidity and mortality, but to change the distributions of factors that affect the occurrence of morbidity and mortality. This paper addresses the projected health consequences of climate change, reviewing the projected adverse effects, the diverse strategies that might mitigate these effects, and the potential effectiveness of these strategies. It addresses temperature, aeroallergens and allergic diseases, air pollution, and infectious diseases.

ADAPTING TO CLIMATE CHANGE: THE PUBLIC POLICY RESPONSE -- PUBLIC INFRASTRUCTURE

James E. Neumann and Jason C. Price. Resources for the Future (RFF). RFF Domestic Adaptation Series. June 2009. 43 pages.

<http://www.rff.org/rff/documents/RFF-Rpt-Adaptation-NeumannPrice.pdf>

This paper assesses the threats and needs that multidimensional climate change imposes for public infrastructure, reviews the existing adaptive capacity that could be applied to respond to these threats and needs, and presents options for enhancing adaptive capacity through public sector investments in physical, planning, and human resources. The paper considers four types of infrastructure:

transportation; energy generation and transmission; water, sewer, and telecommunications; and coastal defense.

TERRESTRIAL ECOSYSTEM ADAPTATION

Steven W. Running and L. Scott Mills. Resources for the Future (RFF). RFF Domestic Adaptation Series. June 2009. 38 pages.

<http://www.rff.org/rff/documents/RFF-Rpt-Adaptation-RunningMills.pdf>

This report evaluates adaptation issues for natural ecosystems, specifically focusing on the interactions with the abiotic environment of plants and animals, along with other organisms with which they interact (e.g., disease-causing bacteria and viruses). The authors limit themselves to natural ecosystems in which the predominant vegetation has developed without having been planted, irrigated, or fertilized. This will evaluate the potential magnitudes and challenges facing terrestrial ecosystems in the United States in adapting to changing climate over the next 30–50 years.

AGRICULTURE AND THE FOOD SYSTEM: ADAPTATION TO CLIMATE CHANGE

John M. Antle. Resources for the Future (RFF). RFF Domestic Adaptation Series. June 2009. 28 pages.

<http://www.rff.org/rff/documents/RFF-Rpt-Adaptation-Antle.pdf>

This paper discusses the capability of U.S. agriculture to adapt to climate change. After discussing key features of U.S. agriculture, findings of some recent modeling studies on the economic impacts of climate change are reviewed, and their limitations discussed. Next, critical biophysical and economic vulnerabilities of agriculture and the food system are identified, and the appropriate role for public policy in adaptation is discussed. The paper concludes by identifying areas for additional research on adaptation.

AN ADAPTATION PORTFOLIO FOR THE UNITED STATES COASTAL AND MARINE ENVIRONMENT

David Kling and James N. Sanchirico. Resources for the Future (RFF). RFF Domestic Adaptation Series. June 2009. 73 pages.

<http://www.rff.org/rff/documents/RFF-Rpt-Adaptation-KlingSanchirico.pdf>

The goal of this paper is to discuss a portfolio of adaptation policies, i.e. the actions taken to enhance the resilience of human and natural systems to the effects of climate change and variability for marine and coastal environments within the United States and its territories. Associated with each policy in this portfolio are questions regarding the applicability (and need) in particular locations and the spatial scale, timing, and type of instrument to employ.

EMERGING CLIMATE CHANGE IMPACTS ON FRESHWATER RESOURCES: A PERSPECTIVE ON TRANSFORMED WATERSHEDS

Alan P. Covich. Resources for the Future (RFF). RFF Domestic Adaptation Series. June 2009. 45 pages.

<http://www.rff.org/rff/documents/RFF-Rpt-Adaptation-Covich.pdf>

As a result of temperature increases in many regions, experts generally agree that more extremes in the variability of precipitation will characterize most watersheds in the United States. More intense floods and droughts will create numerous challenges for resource managers and for ecologists to understand the

newly emerging conditions that affect ecosystem processes. Some consequences of these extreme events are well understood from previous experience and studies; what may differ from known impacts are the cumulative effects of multiple disturbances occurring in new combinations and at new spatial and temporal scales.

THE ARCTIC CLIMATE CHANGE AND SECURITY POLICY CONFERENCE: FINAL REPORT AND FINDINGS

Kenneth Yalowitz, James Collins and Virginia Ross. Carnegie Endowment for International Peace. June 2009. 36 pages.

http://carnegieendowment.org/files/arctic_climate_change.pdf

The accelerating pace of climate change, increasing competition over resources, and new territorial claims demand that greater attention be paid to the Arctic. As the most immediate and serious threat to the region, minimizing the environmental impact of climate change and resource development must be the top priority.

THE CONSUMER BURDEN OF A CARBON TAX ON GASOLINE

Kevin A. Hassett, Aparna Mathur and Gilbert E. Metcalf. American Enterprise Institute (AEI). AEI Working Paper #147. May 26, 2009. 31 pages.

<http://www.aei.org/docLib/Consumer%20Burden%20AEI%20WP%20147.pdf>

This paper measures the incidence of a carbon tax on gasoline using current income and two measures of lifetime income to rank households. Results suggest that carbon taxes on gasoline are more regressive when annual income is used as a measure of economic welfare than when lifetime income measures are used. In addition the authors find that the regional variation in the gasoline tax burden is likely to be modest varying by less than one-half of a percentage point with little fluctuation over the years of our analysis.

GLOBAL WARMING'S SIX AMERICAS 2009: AN AUDIENCE SEGMENTATION ANALYSIS

Anthony Leiserowitz, Edward Maibach and Andrew Light. Center for American Progress. May 20, 2009. 140 pages.

<http://www.americanprogress.org/issues/2009/05/pdf/6americas.pdf>

Climate change public communication and engagement efforts must start with the fundamental recognition that people are different and have different psychological, cultural, and political reasons for acting -- or not acting -- to reduce greenhouse gas emissions. This report identifies six unique audiences within the American public that each responds to the issue in their own distinct way: the Alarmed (18%) are fully convinced of the reality and seriousness of climate change and are already taking individual, consumer, and political action to address it; the Concerned (33%) are also convinced that global warming is happening and a serious problem, but have not yet engaged the issue personally; the Cautious (19%), the Disengaged (12%) and the Doubtful (11%) represent different stages of understanding and acceptance of the problem, and none are actively involved; the Dismissive (7%) are very sure it is not happening and are actively involved as opponents of a national effort to reduce greenhouse gas emissions.

ENABLING ADAPTATION: PRIORITIES FOR SUPPORTING THE RURAL POOR IN A CHANGING CLIMATE

Manish Bapna, Heather McGray, Gregory Mock and Lauren Withey. World Resources Institute (WRI). Issue Brief. May 2009. 12 pages.

http://pdf.wri.org/issue_brief_enabling_adaptation.pdf

Effective climate adaptation requires an enabling environment -- one that grants the poor the rights, resources and access they need to sustain and benefit from ecosystems, governments and markets. Development experience provides important lessons for fostering such enabling environments, including principles of good governance that provide the rural poor with control of the ecosystems on which they depend.

THE COMPETITIVENESS IMPACTS OF CLIMATE CHANGE MITIGATION POLICIES

Joseph E. Aldy and William A. Pizer. Resources for the Future (RFF) and Pew Center on Global Climate Change. May 2009. 56 pages.

<http://www.pewclimate.org/docUploads/competitiveness-impacts-report.pdf>

This paper seeks to quantify the potential “competitiveness” effect on U.S. manufacturing industries of a domestic cap-and-trade system to regulate greenhouse gases. Statistical analysis suggests that at a modest CO2 price of \$15 per ton there is not likely to be a significant competitiveness impact on U.S. manufacturing as a whole. A subset of energy-intensive industries may, however, face competitive pressures from abroad as their energy costs rise with the imposition of a carbon price. These modest impacts could be addressed through policies targeted to those sectors or sub-sectors most vulnerable to these pressures, and we outline a range of policy options.

REGULATING GREENHOUSE GASES UNDER THE CLEAN AIR ACT

World Resources Institute (WRI). Bottom Line Series. Issue 12. April 2009. 2 pages.

http://pdf.wri.org/bottom_line_ghg_clean_air.pdf

On April 17, 2009, the U.S. Environmental Protection Agency (EPA) issued a finding that greenhouse gas (GHG) emissions pose a threat to public health and welfare, opening the door to GHG regulation under the Clean Air Act. This fact sheet answers some common questions about how GHGs could be regulated, what outcomes could result from the EPA’s process, and how regulations could impact business.

GREEN BUILDING

GREEN JOBS/GREEN HOMES NEW YORK: EXPANDING HOME ENERGY EFFICIENCY AND CREATING GOOD JOBS IN A CLEAN ENERGY ECONOMY

Center for American Progress. May 2009. 136 pages.

http://www.americanprogress.org/issues/2009/05/pdf/ghginy_v10.pdf

Over the next two years, federal stimulus funding will pour into state energy-efficiency programs and prompt a massive ramp-up of existing capacity. These investments offer a historic opportunity to develop green policy infrastructure at the state and local levels that can be sustained after the stimulus dollars are spent. Those states that have already established energy-efficiency infrastructure and possess a coherent plan to implement expansion will be best positioned to lead this national moment. Green Jobs/Green Homes NY is such a plan: a policy roadmap for New York State to achieve mass-scale energy-efficiency improvements -- or retrofits -- of 1 million housing units over the next five years.

BUILDING A BETTER FUTURE: MOVING TOWARD ZERO POLLUTION WITH HIGHLY EFFICIENT HOMES AND BUSINESSES

Charlotte Jameson and Rob Sargent. Environment America Research & Policy Center. April 2009. 30 pages.

http://www.environmentamerica.org/uploads/qk/zy/qkzycNV75kmR8g8HIAR7rw/AME_BBA_web.pdf

40 percent of America's energy -- ten percent of all the energy used in the world -- goes towards powering buildings. Much of this energy is simply wasted through poor insulation, leaky windows, inefficient lighting, heating or cooling systems, and poor construction techniques. Building a more energy-efficient America is one of the most effective and least expensive ways to increase energy security and reduce global warming pollution, while creating jobs and improving economic competitiveness.

POLLUTION

TOXIC LEGACY: LONG-TERM EFFECTS OF OFFSHORE OIL ON WILDLIFE & PUBLIC HEALTH

Oceana. March 2009. 36 pages.

http://oceana.org/fileadmin/oceana/uploads/Climate_Change/Toxic_Legacy/Toxic_Legacy_FINAL.pdf

Renewed interest in oil drilling in the ocean, spurred by a period of high gasoline prices, threatens marine life and ocean ecosystems. The chances of oiling and poisoning wildlife, the risks of contamination and economic loss to local communities, and the contribution to climate change will all be greater if we expand offshore drilling. The risks are especially grave in the Arctic, a unique and fragile ecosystem, where oil development is already underway and where even a small spill could be impossible to clean up.